second joint more slender and longer; third joint subcylindrical, thicker at the base than the apex, which is beset with minute points. Labium subquadrate, broader at the apex than the base. Labial palpi two-jointed; first joint thick, cylindrical; second joint slender, rounded at apex. Body corneous, highly polished, minutely punctured, last segment terminating in two short protuberances curved upward. Over the body are scattered a few light brown hairs. Color: head and body testaceous. Body beneath somewhat paler. Length about 25 mm. Width about 3.50 mm.

Pupa sordid white, elongated, with each of the abdominal segments at the sides provided with a flat, quadrate process. Anal segment with two rather long processes at the extremity. Thorax subquadrate, sides rounded. Head bent downward; wings folded around the sides of the body. Length 9 mm. Width 5 mm.

Lives on wood of oak, chestnut, and hickory. Collected early in April. Pupated May 18th. Imago emerged June 9th.

A New Introduction to Entomology.* —We have here a novel and suggestive book, in which the interrelationships of insects are worked out on independent lines. Neither Professor Hyatt, a zoologist and paleontologist of the very highest repute, nor his associate Miss Arms, has ever before claimed a hearing in the entomological world, and they have approached the subject quite untrammelled by tradition or authority, but with experience as successful teachers and thoroughly imbued with the principles which guide modern science. It is not a text book for scholars, but precisely what its title indicates, a guide for teachers. It abounds with novel suggestions, and is interspersed with cautions of the utmost importance to teachers. We have room here for only one passage, in which the limitations of the Darwinian theory are enforced:

"It is very important that teachers should be cautious in allowing themselves the free use of explanations which the doctrine of Natural Selection seems to furnish. The danger lies in the fascination of the logical form presented by this doctrine, the ease with which it seems to explain even the most complicated relations of organic beings, and the general although unfounded belief that it is universally accepted and believed in by naturalists. They will find . . . that this doctrine is not used by any investigators in accounting for the origin of structures and their modifications, and only to a limited extent by those quoted above and others of the same school [the so-called Neo-Lamarckians], in explaining the preservation of structures and modifications after they have been originated by the action of physical and other causes."

A diagrammatic scheme for illustrating the authors' views of the phylogeny of insects is given on a preceding page of this number, and we hope to print at an early date their concluding general remarks, after a survey of the whole field.

Recent English publications.— The fourth part of Buckton's Monograph of the British Cicadae or Tettigidae, just issued, completes the first of the two volumes of which the work will be composed. The first volume contains 41 plates and 211 pages of text, 78 of the latter given up to the Introduction. The remaining volume will treat of the Jassides, Deltocephalides and Typhlocybides of the classification adopted by him.

The fourth part of Moore's Lepidoptera Indica is of less interest than the preceding. The plates are still concerned with the Euploeinae but only with species of very similar appearance having a dull brown ground color, and of which the early stages are not known. The modification of the hind mar-

*Insecta (Guides for science-teaching, viii). By Alpheus Hyatt and J. M. Arms. 16mo, Boston, 1890. Published for the Boston Society of Natural History by D. C. Heath & Co. pp. 23, 300, figs. 223.

gin of the fore wings in the males of all these species to accommodate the sexual scale-pocket in the medio-submedian interspace is a striking feature. The text, which keeps excellent pace with the plates, has many points of interest and calls attention to some interesting cases of mimicry.

Mr. W. F. Kirby has just published with Van Voorst's successors a synonymic catalogue of dragon-flies living and fossil. It extends to 202 pp. 8vo. They are arranged systematically under families, subfamilies and divisions, the further subdivisions by Selys and others, legions and groups, being ignored. So too all subgenera are regarded as genera. This has at least simplified the author's work, but can hardly be regarded as satisfactory. A number of new generic terms are employed for preoccupied names and in a few cases radical changes occur, as when Agrion is made to replace Calopteryx (because Latreille had fixed the type as the *Libellula virgo* of Linné) and a new term Coenagrion employed for Agrion, carrying with it the subfamily name Coenagrioninae. Selys strenuously objects to this in the comptes-rendus of the Belgian entomological society. About 1800 nominal species are entered in 267 genera, besides a few in the appendix. 102 fossil species are catalogued separately. The work appears to be conscientiously done and will certainly be of as great an assistance to the students of Odonata as that of Lepidoptera, prepared by the same author, is to its votaries.

The March of Hyperchiria io.—I have carefully watched a brood of *io* larvae in their marching, and have found the secret of their regularity. The leader spins a fine thread as he moves, and the larva next in order follows the thread, and spins one himself. If he follows the thread by feeling it at one side, instead of following *on* it, the thread which is spun by No. 2 lies parallel with that spun by No. 1, and usually each thread will be followed by a larva, when the wedge-shaped "order of march" will result—No. 1 ahead, No. 2 following just a trifle at one side, No. 3 and No. 4 side by side, No. 3 following the thread of No. 1, and No 4 that of No. 2; No. 5 will follow No. 3; No. 6 will often feel the two threads and march between them, when No. 7 will follow No. 4, and so the ranks will widen. The thread can be seen plainly with a lens, and the process watched. If a larva loses his way he feels for the thread, and seems able to tell, by its surface, in which direction the procession has gone, always following the right direction after a moment's careful feeling of the thread. *Caroline G. Soule.*

More damage by white ants in New England. — At a recent meeting of the Cambridge Entomological Club Mr. S. H. Scudder showed the work of white ants, *Termes flavipes,* on the wooden tubs containing plants at the Botanic Garden. This and some of the culprits were brought to him by Frederick A. Quinn, one of the employes of the Garden, who stated that they had destroyed some of the tree-ferns growing in such tubs. This shows that the white ants are there increasing in numbers and have become a real element of danger, for in 1885 Dr. Hagen reported in the Canadian entomologist (v. 17, 134–135) that "the earth in the hot-houses here in Cambridge is largely infested by white ants, but as far as I know no destruction of plants has been observed." Two years later the speaker pointed out (ibid., v. 19, 218) that geranium cuttings were attacked by white ants in the forcing houses attached to the Mt. Auburn cemetery; but here we find a more serious damage. On visiting the Garden Mr. Scudder was shown by the head gardener, Mr. Cameron, a plant almost completely destroyed in which the traces of their work were very apparent. The plant was *Cyathea insignis,* four or five feet high. One of the same kind had been destroyed before and thrown away. According to Mr. Cameron, the ants seemed to show a preference for the